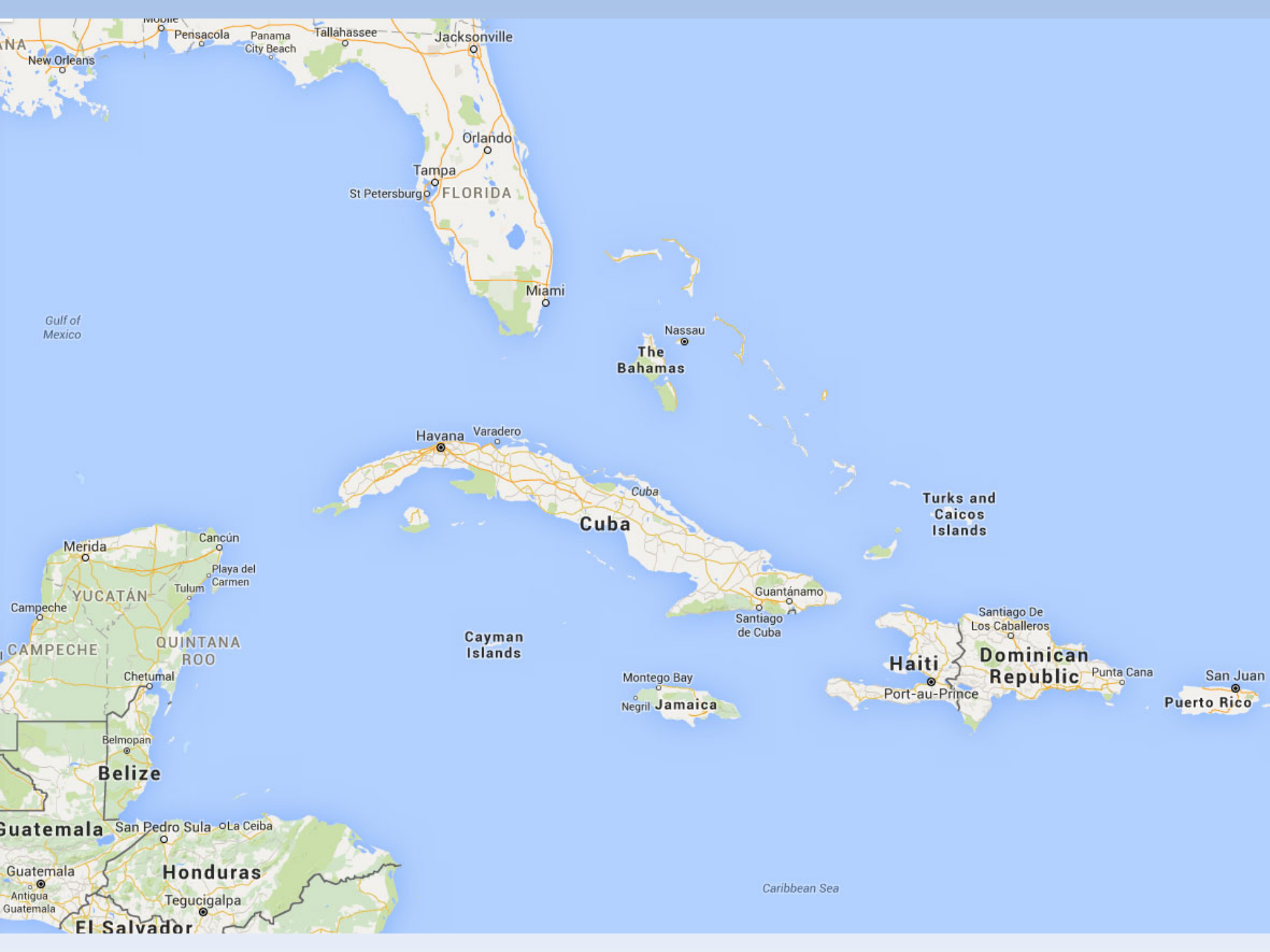




**Insect Collecting in Cuba:
recent experiences and
outlook for the future**

Robert Anderson, CMN



Gulf of Mexico

FLORIDA
Jacksonville
Orlando
Tampa
St Petersburg
Miami

The Bahamas
Nassau

Cuba
Havana
Varadero
Cuba
Guantánamo
Santiago de Cuba

Cayman Islands

Jamaica
Montego Bay
Negril

Turks and Caicos Islands
Haiti
Port-au-Prince
Santiago De Los Caballeros
Dominican Republic
Punta Cana
San Juan
Puerto Rico

Caribbean Sea

Merida
Cancún
Playa del Carmen
Tulum
YUCATÁN
Campeche
QUINTANA ROO
Chetumal
Belmopan
Belize

Guatemala
San Pedro Sula
La Ceiba
Guatemala
Antigua
Honduras
Tegucigalpa
El Salvador

Some Statistics

Area 109,884 sq. km (104th)

Population 11,238,317 (106th)

GDP (per capita) \$6,985 (86th)

HDI (health) 0.815 (44th)

highest doctor/patient ratio in world

Currency Peso

CUC (convertible peso)

Provinces 16

Highest Point Pico Turquino (1,974m)

First Settlement Baracoa, 1511

Tourism

Canada (945,000/2010), UK, Italy, Spain

Cubans now second highest number of tourists









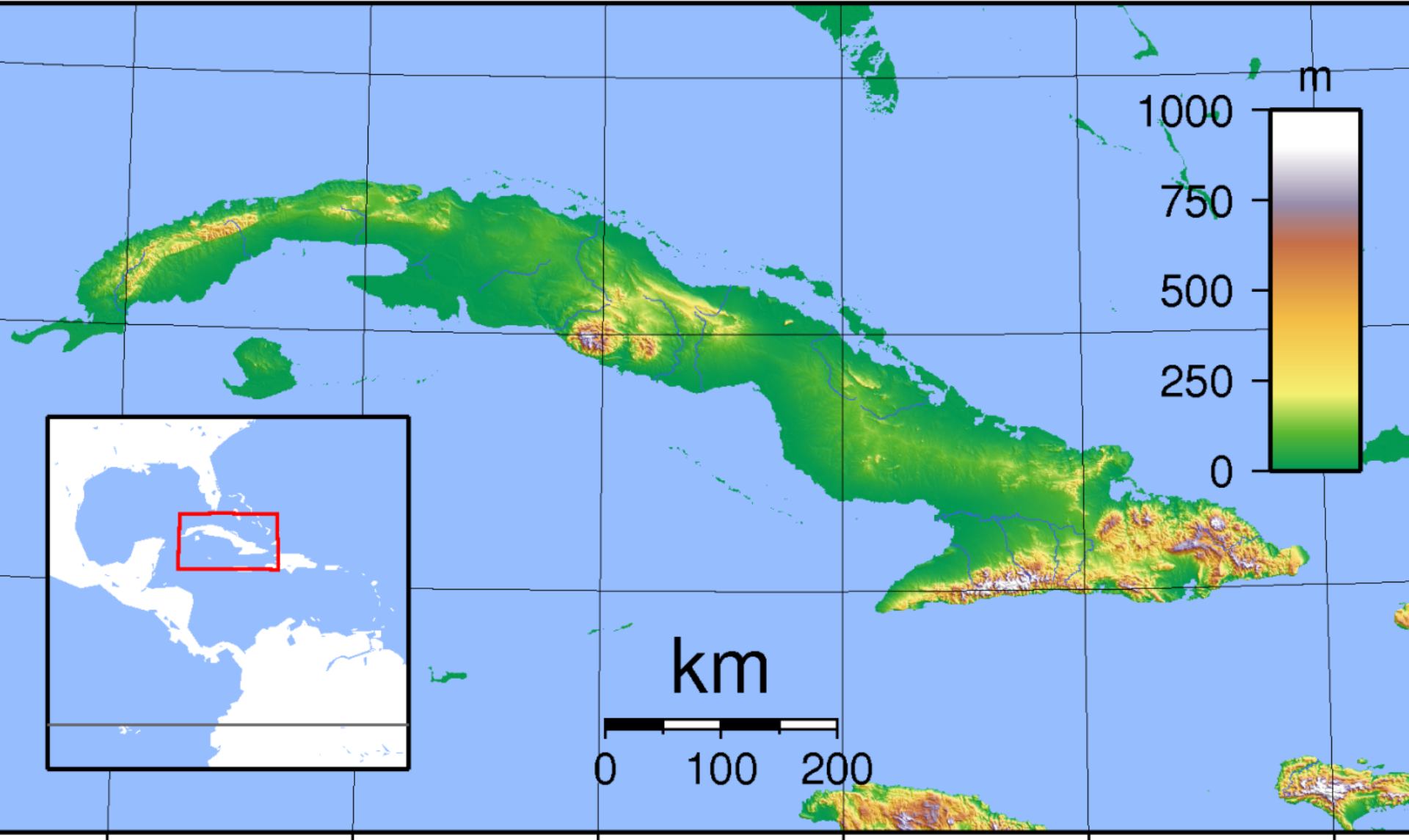


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KAR UNIDAS



Topography



CUBA: EXTANT FORESTS AND MANGROVES





243 km

US Dept of State Geographer
© 2015 Google
Image Landsat
Data SIO, NOAA, U.S. Navy, NGA, GEBCO

Google earth























ESTACION
336

Los jóvenes cienfuegueros
no le fallamos
a la REVOLUCION

PARQUE NACIONAL TURQUINO





Descubriendo el Turquino

Discovering Turquino



"Cualquiera que se interesa por la geografía de un país se preguntará inevitablemente: ¿Cuál es la montaña más alta? ¿Qué altura tienen. Recuerdo muy bien que cuando muchacho me llenaba de envidia el hecho de que Noruega, aunque más pequeña que mi querida patria, Suecia, tuviera montañas más altas".

Ekman

El naturalista sueco Erik Leonard Ekman marcado por la razón de su vida: la botánica; tuvo como reto, a menos de un año de llegar a Cuba, el ascenso al Turquino.

La marcha lo emprendió el 4 de abril de 1915 y la lucha para atravesar la montaña de la Maestra y sus riscos fue ardua. Demoraron 13 días en alcanzar su objetivo y el 17 de abril a las 4:00 pm fue que conquistaron la cima más alta de Cuba.

"Dotados ya del privilegio que se reservan los conquistadores de grandes elevaciones, de poder dar nombre como los dioses, a las montañas, denominaron Pico Suecia a la elevación que se alza al este del Turquino y Pico Cuba a la que se erige al oeste". Así quedaron bautizados Loma Redonda y las montañas llamadas Gemelas las renombraron Pico Joaquín y Pico Regino en honor a los prácticos (Regino Verdecia y Joaquín Rodríguez) que se aventuraron con él en tan difícil tarea.

Nadie podía imaginar que aquel hombre sería uno de los más grandes botánicos del siglo XX, descubridor y redescubridor de la Flora de las Antillas.

"Anyone who takes interest on the geography of a country will unavoidably ask himself: Wish one is the highest mountain? What's its high? I remember very well that when I was a child it filled me with envy the fact that Norway, although smaller than Sweden, my beloved country, had higher mountains."

Ekman

The Swedish naturalist Erik Leonard Ekman marked by the reason of his life, Botany, had as a challenge, less than a year from his arrival to Cuba, the ascent to Turquino peak.

He set out on April 4th, 1915 and the struggle to cross the forest of La Maestra and its risks was arduous. It took them 13 days to reach their aim and at 4 pm on April 17th they conquered Cuba's highest summit.

"Endowed already with the privilege reserved for the conquerors of great mountains, of naming the mountains like gods themselves, they named Suecia Peak the elevation that rises to the east of Turquino, and Cuba Peak to the one that rises to the west". Like that, Loma Redonda and the mountains called Twins were baptizad; these last were renamed Joaquín Peak and Regino Peak in honor of the local guides (Regino Verdecia and Joaquín Rodríguez) who ventured with him into such a hard task.

No one could imagine that that man would be one of the greatest botanists of the 20th century, discoverer and re-discoverer of the West Indies flora.

Hotel de Bayamo, lugar donde se hospedó Erik L. Ekman previo a su ascenso al Turquino.



Pico Turquino



Erik L. Ekman naturalista Sueco

Pico Joaquín

Pico Regino

Loma Redonda



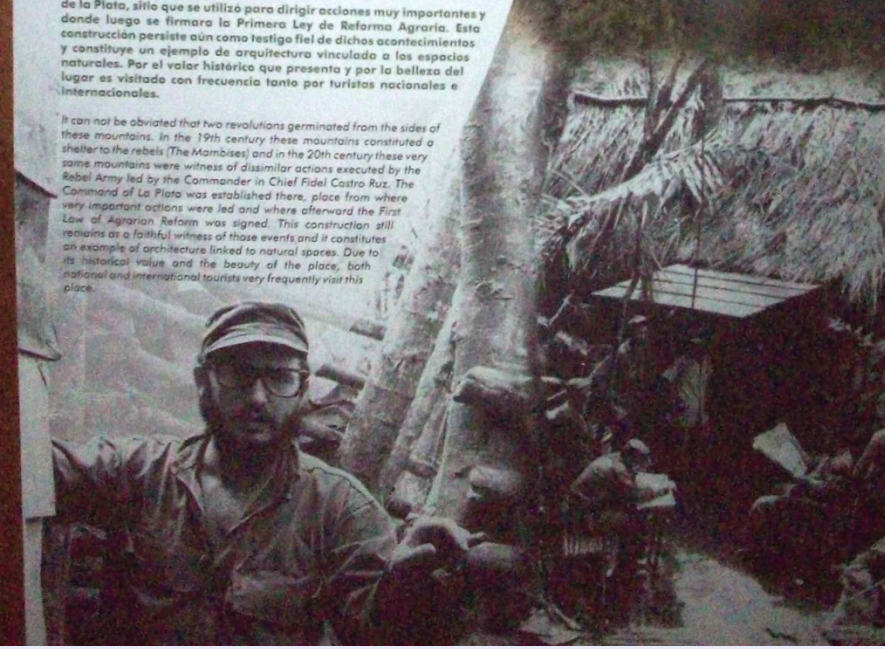
Historia revolucionaria

Revolution History



No se puede obviar que en las faldas de la Sierra Maestra germinaron dos revoluciones. En el siglo XIX estas montañas constituyeron refugio para los mambises y en el siglo XX fueron testigo de disímiles acciones llevadas a cabo por el Ejército Rebelde lideradas por el Comandante en Jefe Fidel Castro Ruz. Allí se estableció la Comandancia de la Plata, sitio que se utilizó para dirigir acciones muy importantes y donde luego se firmara la Primera Ley de Reforma Agraria. Esta construcción persiste aún como testigo fiel de dichos acontecimientos y constituye un ejemplo de arquitectura vinculada a los espacios naturales. Por el valor histórico que presenta y por la belleza del lugar es visitado con frecuencia tanto por turistas nacionales e internacionales.

It can not be obviated that two revolutions germinated from the sides of these mountains. In the 19th century these mountains constituted a shelter to the rebels (The Mambises) and in the 20th century these very same mountains were witness of dissimilar actions executed by the Rebel Army led by the Commander in Chief Fidel Castro Ruz. The Command of La Plata was established there, place from where very important actions were led and where afterward the First Law of Agrarian Reform was signed. This construction still remains as a faithful witness of those events and it constitutes an example of architecture linked to natural spaces. Due to its historical value and the beauty of the place, both national and international tourists very frequently visit this place.







DANGER
COURTESY OF THE NATIONAL SYSTEM
COURTESY OF THE NATIONAL SYSTEM
COURTESY OF THE NATIONAL SYSTEM

WILSON'S CREEK











★ ESCASOS, COMO LOS MONTES.
SON LOS HOMBRES QUE SABEN
MIRAR DESDE ELLOS, Y SIENTEN
CON ENTRAÑAS DE NACION, O DE
HUMANIDAD. ★
MARTÍ ★

Collaborator(s). You will need to contact and work closely with a good and reliable contact person, ideally a fellow scientist sharing your taxonomic interest.

They will secure all required signatures for your permits and be your chaperone.

Work visa. It is possible to travel to Cuba as a tourist but this type of visa restricts where you can go in the country, where you can stay overnight, and your ability to freely use the peso (moneda nacional).



ROWING MASTERS

1992

HERPETOLOGIA

HERPETOLOGIA

HERPETOLOGIA

HERPETOLOGIA

HERPETOLOGIA

HERPETOLOGIA



XX

TRD
GOBIERNO DE LA CIUDAD DE LA HABANA
CARIBE

IMPERIAL

NARANJAS

CAFETERIA

Parque del Alameda



HAY CALABROS
EN PACTO CON LOS
HAY PLANTAS Y OSCOTAS
EN LOS ESCALONES

ACADEMY OF DECEIVING
YUSEO
TOV AS ROV LY
1988

Street sign









Dynastinae

195000
SCARABAEIDAE

Melolonthinae



AS 2013-05

AS 2013-05

S22 SPORTS

The Toronto Sun MAY 7, 2013

BLUE JAYS WATCH



Buehrle

...the line... he saw veteran **Henry Blanco** behind the plate and he on the bench. When asked if there was anything wrong (a minor injury), Arenchiba replied tersely: "Talk to Gibby."

Gibby — Blue Jays manager **John Gibbons** — explained that he simply wanted to hook up Blanco with left-hander **Mark Buehrle** to see if he can in a game against Toronto. Escobar was also out of the starting lineup Monday, and **Sean Rodriguez** was at short.

Johnson, meanwhile, was in left field, making his 13th start of the season in the outfield. A notorious streaky hitter, Johnson also has

BOXSCORE

Toronto	AB	R	H	BI	BB	SO	Avg.
Lawrie 3b	4	0	0	0	0	3	.186
Cabrera lf	5	0	0	0	0	3	.258
Davis pr rf	0	0	0	0	0	0	.271
Bautista cf	3	0	0	0	0	1	.228
Encarnacion 1b	3	5	4	0	0	1	.222
Lind dh	4	0	1	0	0	2	.182
Bonifacio pr dh	0	4	5	0	0	0	.248
Rasmus	4	5	2	0	0	0	.136
	5	2	3	1	0	0	.254
	3	1	1	0	0	0	.255
	2	2	1	0	0	0	.225
	3	1	1	0	0	1	.117
	1	1	1	0	0	1	.117

Blanco...
 Robert Hernandez



OUT PITCH

Hernandez, formerly known as Fausto Carmona, relies on his sinking two-seam

...opening...
 Dickey is 2-5 with a 5.30 ERA, while Price is 1-3 with a 6.25 ERA.

— Mike Rutsey

BLUE JAYS CALENDAR

Results and future games in May

STATISTICS

Wright — Hellickson, Wright, Balk — Oliver; Umpires — Home, Mike Everitt; First, Marty Foster; Second, Scott Barry; Third, Tim Welke; T — 3:31, ATL at St. Petersburg — 9:52

Places to stay. Hotels are few and far between and frequently full. Casas particulares or private houses are common in big cities (but often very hard to find).

Campismos are campgrounds with small cabins that you can rent; some of these are for locals only and they are frequently full on weekends. These are nice as they are usually in a rural setting with local access to decent habitats. Surprisingly there are also many biological stations or houses operated by Flora y Fauna, the national wildlife agency, that you can arrange to use but only via your contact.





















1

2











Guides. You will need a guide or chaperone everywhere you go in the field. This can be your colleague or a local person hired or provided for you at each locality. Always go with a guide, they know the habitats really well and you'll be more productive in the end.



← ALTO DEL NARANJO
← CAMP. EL COJO
← CAMP. JOAQUIN



SOLEDAD



Panamericana
CADENA DE TIENDAS

... minorista de la corporación Cimex



Car rentals. Like hotels, car rentals can be hard to get as there are few cars and increasing demand. They are expensive (\$150 per day) and types of cars are limited and quality may not be the best.

Most Cuban roads are good and passable in a car but once off the main roads things get bad and good clearance is necessary.

You may have to do a lot of walking.





Driving. Cuban law states that in an accident you are guilty until you are proven innocent and you will be required to remain nearby if you are in an accident.

Drive carefully and as the roads are filled with bikes and horse wagons, keep your eyes open ALL the time. Night driving is a nightmare as none of these vehicles, or the many people who walk the roads, have lights!





4246
ZAPATA





Abierto

TAXI















Money. You'll have to get it all there. The CUC is basically on par with the US\$ and moneda nacional is about 1/10 that value. In some rural areas their economy is all moneda nacional so you will need to have some with you at all times. You'll be paying for everything, for everybody. Stock up in big cities.

Food. Depending on where you are, finding food can be a major issue. Even in larger cities it takes the better part of a day to get meat, veggies, canned items, rice, beans, etc. as these are often in different stores or markets. Imported items are few and expensive and local products are limited and some not up to the standards you may be used to. Restaurants are very few in small towns or rural areas. If you stay at a private house you can negotiate meals and these are often pretty good.



4.10

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Paperwork and permits: I saved the worst for last. There is a lot but most or often all of it will be done by your collaborator.

Before your trip you need to submit a list of localities you plan to visit with dates. Your collaborator will do the necessary legwork which will likely include a trip to Havana to get the collecting and export permits.

The day before you get to a specific collecting site (or the day of) you need to go with your collaborator to the appropriate large city and get **in person** permission from the local military, local immigration authorities and the Flora y Fauna people. These are in different offices scattered throughout the city and a full day is usually necessary for this at each locality you visit.

Authorities do check you (and hand luggage) upon departure so make sure what you collected matches the permit exactly.

Miscellanea

We have found that people are very honest and you will feel very safe. All crimes are few. People are often intimidated by you but once they get to know you and what you're doing they are wonderfully friendly. The kids are the friendliest and least reserved.

Cubans are paid about \$20 per month salary so you will be expected to pay for ALL of their costs during the trip. Budget for this. Be prepared for the occasional unexpected visitor at dinner or for the drive to the next site and even if the car seats 4, be prepared to take 6. We tip guides and our collaborators, usually around \$20 for local guides, \$100 per collaborator.

Baseball is huge in Cuba so I take used gloves as gifts for kids. Other great gifts are deodorant, toothpaste, shampoo, etc. Forceps, headlamps, rechargeable batteries, etc.

Electricity, gasoline and bottled water are widely available, medical services terrific.





1 mm





02438

CON
FIDEL
REVOLUCIÓN



EN GUANTÁNAMO



SÍ SE PUEDE



Future Outlook

Expected higher tourism, especially from United States ; cultural and ecotourism will increase taking people away from beaches

Better logistics (hotels, restaurants, stores, car rentals, roads, etc.) will need to be developed

Permitting and reporting processes will need to be simplified

TEST

1. What is the common name of the national tree of Cuba?

PRIZE : Can of Cristal



TEST

2. Who is the person whose bust sits atop Pico Turquino?

PRIZE : Can of Buccanero

